

PATENT COOPERATION TREATY
PCT
INTERNATIONAL PRELIMINARY EXAMINATION REPORT
(PCT Article 36 and Rule 70)

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Applicant's or agent's file reference HM/KP/8124INT	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/GB 03/02304	International filing date (day/month/year) 27.05.2003	Priority date (day/month/year) 31.05.2002
International Patent Classification (IPC) or both national classification and IPC B05C17/035		
Applicant FISHER, Martin		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 6 sheets, including this cover sheet.

This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of 12 sheets.

3. This report contains indications relating to the following items:

- I Basis of the opinion
- II Priority
- III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV Lack of unity of invention
- V Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI Certain documents cited
- VII Certain defects in the international application
- VIII Certain observations on the international application

Date of submission of the demand 08.12.2003	Date of completion of this report 25.08.2004
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**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. PCT/GB 03/02304

I. Basis of the report

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

Description, Pages

2, 3, 5, 8-27 as originally filed
1, 1a, 1b, 4, 6, 6a, 7 received on 28.06.2004 with letter of 25.06.2004

Claims; Numbers

1-75 received on 28.06.2004 with letter of 25.06.2004

Drawings, Figures

1-20 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item:

These elements were available or furnished to this Authority in the following language: , which is:

- the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- the language of publication of the international application (under Rule 48.3(b)).
- the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- contained in the international application in written form.
- filed together with the international application in computer readable form.
- furnished subsequently to this Authority in written form.
- furnished subsequently to this Authority in computer readable form.
- The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- the description, pages:
- the claims, Nos.:
- the drawings, sheets:

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EXAMINATION REPORT**

International application No.

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5. This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

III. Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

1. The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non-obvious), or to be industrially applicable have not been examined in respect of:

the entire international application,

claims Nos. 1-34, 37, 51-58, 70, 75

because:

the said international application, or the said claims Nos. relate to the following subject matter which does not require an international preliminary examination (specify):

the description, claims or drawings (*indicate particular elements below*) or said claims Nos. 1-34, 37, 51-58, 70, 75 are so unclear that no meaningful opinion could be formed (*specify*):

see separate sheet

the claims, or said claims Nos. are so inadequately supported by the description that no meaningful opinion could be formed.

no international search report has been established for the said claims Nos.

2. A meaningful international preliminary examination cannot be carried out due to the failure of the nucleotide and/or amino acid sequence listing to comply with the standard provided for in Annex C of the Administrative Instructions:

the written form has not been furnished or does not comply with the Standard..

the computer readable form has not been furnished or does not comply with the Standard..

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	
	No: Claims	67, 71, 73, 74
Inventive step (IS)	Yes: Claims	
	No: Claims	67, 71, 73, 74
Industrial applicability (IA)	Yes: Claims	67, 71, 73, 74
	No: Claims	

2. Citations and explanations

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. **PCT/GB 03/02304**

see separate sheet

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/GB 03/02304

Reference is made to the following documents:

- D1: GB-A-2 309 183 (BLACK & DECKER INC) 23 July 1997 (1997-07-23)
- D2: DE 296 06 843 U (HOFMANN HEINZ) 8 August 1996 (1996-08-08)
- D3: WO 02/28547 A (WILEY LIEN L) 11 April 2002 (2002-04-11)

Re Item III

Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

1. As already mentioned in Box II of the International Search Report of 9.10.2003, the International Searching Authority found multiple inventions in the present application. No additional search fees were paid by the applicant. Consequently the search was carried out for **claims 1 to 34, 37, 51-58, 67, 70, 71 and 73-75** only. Accordingly, the present opinion can only be based on these claims.
2. No opinion with regard to novelty, inventive step and industrial applicability can be given with respect to **claim 1**, as the claim as it presently stands it is not clear, because it contains method steps, e.g. an operator in use holding the tool by the body and operating control means for control of the bias meas, which refer to actions that need to be performed by the operator. **Claim 1** does not met the clarity requirements of Article 6 PCT. Consequently, no opinion can therefore be given on any of the dependent **claims 2-34, 37, 51**.
3. No opinion with regard to novelty, inventive step and industrial applicability can be given with respect to method **claim 53**, since it refers to an applicator (e.g. "...use of an applicator as claimed in any preceding claim"), which has not been clearly defined. The clarity requirements of Article 6 PCT are not met. Consequently, no opinion can be given to the dependent **claims 54-58**.
4. No opinion with regard to novelty, inventive step and industrial applicability can be given with respect to **claim 70**, as the claim contains a contradiction in the definition of the position of the paint bias means, i.e. "...with the paint distribution means all at one end of the handle.." and at the same time "the paint bias means extending from another end of the handle". **Claim 70** does not met the clarity requirements of Article 6 PCT.

Re Item V

Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. The subject-matter of independent **claim 67** does not meet the requirements of Rule 33.1 a), b), c) PCT because the subject-matter of independent **claim 67** is not new in view of the prior art document D1 (cf. page 6, lines 32-35 and figures).
- 1.1 The subject-matter of independent **claim 71** does not meet the requirements of Rule 33.1 a), b), c) PCT because the subject-matter of independent **claim 71** is not new in view of the prior art document D2 (cf. page 1, last paragraph, claims and figures).
- 1.2 The subject-matter of independent **claim 73** does not meet the requirements of Rule 33.1 a), b), c) PCT because the subject-matter of independent **claim 73** is not new in view of the prior art document D3 (cf. page 7, line 8 - page 8, line 16, page 11, lines 3-14 and figures).
- 1.3 Dependent **claim 74** does not contain any features which, in combination with the features of any claim to which it refers, give rise to novel subject-matter (Article 33(2)PCT) as all the features introduced with this claim are also known from D3 (cf. page 7, line 8 - page 8, line 16, page 11, lines 3-14 and figures).

Further remarks

2. Reference numerals are missing after the technical features of the claims (see Rule 6.2b) and PCT Preliminary Examination Guidelines, Chapter III, 4.11).
- 2.1 Independent **claims 52 and 58** do not meet the requirements of Article 6 PCT as they rely on a reference to the description and drawings (see PCT Preliminary Examination Guidelines, Chapter III, 4.10).
- 2.2 Independent **claim 75** does not contain any technical features relating to the structure of the claimed applicator.
- 2.3 Thus independent **claims 52, 58 and 75** of the present Application do not comply with the requirements of Article 6 PCT in that they are not clear.

70. An applicator in which paint biasing means facilitates paint flow to paint distribution means wherein the paint bias means is associated with an extension handle which extends from the paint distribution means to the paint biasing means to allow operation of the applicator at displaced or elevated 5 position whilst still allowing appropriate operation of the paint biasing means.

71. An applicator for applying paint to a surface, the applicator including paint distribution means within which an effective slot outlet is provided through which paint is presented to paint distribution means through use of 10 paint biasing means, the paint being accommodated within a paint canister and that paint canister having a cross-section of elongate dimensions such that the major access of the canister is substantially aligned with the slot for better paint distribution through that slot.

15 72. A paint distribution insert for an applicator of paint, the insert comprising a groove network of varying cross-section and arranged whereby resistance to paint flow through the insert is varied across that insert for more even paint distribution across an outlet from an initial single inlet position of substantially narrower width.

20 73. An applicator for applying paint to a surface wherein that paint is distributed by a roller and the roller is secured through a cam such that there is eccentric rollover rotation with differing gap widths between a roller surface and an outlet between an outlet side upstream of roller rotation direction and 25 an outlet side downstream of roller rotation direction.

74. An applicator as claimed in claim 73, wherein a slot is provided within which a pin is secured to provide for eccentric rotation as well as varying width between the respective sides of the outlet.

30 75. Any novel subject matter or combination including novel subject matter disclosed herein, whether or not within the scope of or relating to the same invention as any of the preceding claims.

62. Pouring apparatus as claimed in any of claims 59 to 61, wherein the pouring member and engaging means are formed integrally, and are made of a resilient flexible material.

5 63. Pouring apparatus substantially as hereinbefore described with reference to the accompany drawings.

10 64. A method of filling a paint container, the method including filling the paint container from a can using pouring apparatus as claimed in any of claims 59 to 63, the pouring apparatus being sized to direct paint during pouring into the paint container.

15 65. A method as claimed in claim 64, wherein the paint container is the body of an applicator as claimed in any of claims 1 to 58.

66. A method of filling a paint container substantially as hereinbefore described with reference to the accompanying drawings.

20 67. An applicator in which a roller is associated with an applicator head such that paint is distributed upon that roller using paint bias means and the head incorporates paint traps to accommodate transient excess flows of paint due to any pulsed action of the paint bias means.

25 68. An applicator for applying paint to a surface, the applicator including paint biasing means to facilitate flow of paint to paint distribution means, the paint biasing means including a grip configured to progressively displace a plunger or piston in order to facilitate paint flow, the displacement range of that grip limited in order to similarly limit displacement of the piston and therefore rate of paint flow.

30 69. An applicator as claimed in claim 68, wherein grip displacement is limited by a stop member.

47. An applicator as claimed in claim 46, wherein the linkage comprises a link plate having an oversized aperture through which the rod passes.

5 48. An applicator as claimed in claim 47, wherein the link plate is biased towards the trigger and, in a relaxed condition, out of engagement with the plunger, so that as the trigger is operated the link plate is brought into engagement with the plunger, further operation of the trigger moving the link plate towards the paint in the body or container and causing the plunger to
10 advance to bias the paint towards the distribution means.

49. An applicator as claimed in claim 2 and any claim dependant thereon, wherein the applicator includes connection means interposed between the applicator head and the body.

15 50. An applicator as claimed in claim 49, wherein the connection means articulated to allow the angle of the paint distribution means to be varied relative to the longitudinal axis of the body.

20 51. An applicator as claimed in claim 30 and any claim dependant thereon, wherein the paint container is formed of translucent material, to provide a visual indication of the amount of paint in the container.

25 52. An applicator substantially as hereinbefore described with reference to the accompanying drawings.

53. A method of applying paint to a surface, the method comprising the use of an applicator as claimed in any preceding claim, the method comprising providing paint to the applicator, holding the body, providing bias to the paint
30 to drive that paint towards the distribution means and operating the control means to control a flow of paint to the paint distribution means, while moving the tool so that the paint distribution means contact and move across a surface to be painted.

Claims

1. An applicator for applying paint to a surface, the applicator including a body for paint, paint distribution means to distribute paint in use onto a surface by contact with that surface, the body including paint biasing means to bias, in use, the paint toward the distribution means, an operator in use holding the tool by the body and operating control means for control of the bias means and so the flow of paint distribution means.
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- 10 2. An applicator as claimed in claim 1, wherein the paint distribution means is releasably engageable with the body and forms a separable applicator head.
- 15 3. An applicator as claimed in claim 2, wherein the head includes mounting means for rotably mounting a roller with a roller surface which in use contacts the surface to be painted.
- 20 4. An applicator as claimed in claim 2 or claim 3, wherein the head includes a hood which partially encloses the roller.
5. An applicator as claimed in any of claims 2, 3 or 4, wherein the head includes flow regulation means to regulate the flow of paint to the roller surface in association with the biasing means.
- 25 6. An applicator as claimed in claim 5 where dependent upon claim 4, wherein the flow regulation means includes a gap defined between a distribution means surface and the hood.
- 30 7. An applicator as claimed in any of claims 2 to 6, wherein the head includes at least one passage defined in the hood and normally a plurality of passages therein.

paint canister having a cross-section of elongate dimensions such that the major axis of the canister is substantially aligned with the slot for better paint distribution through that slot.

5 Further in accordance with the present invention there is a paint distribution insert for applicators of paint, the insert comprising a groove network of varying cross-section and arranged whereby resistance to paint flow through the insert is varied across that insert for more even paint distribution across an outlet from an inlet position of substantially narrower
10 width.

Also in accordance with the present invention there is provided an applicator for applying paint to a surface wherein that paint is distributed by a roller and the roller is secured through a cam such that there is eccentric
15 rollover rotation with differing gap widths between a roller surface and an outlet between an outlet side upstream of roller rotation direction and an outlet side downstream of roller rotation direction.

20 Typically, a slot is provided within which a pin is secured to provide for eccentric rotation as well as varying width between the respective sides of the outlet.

25 Embodiments of the present invention will now be described, by way of example only with reference to the accompanying drawings in which:-

Fig. 1 is a diagrammatic cross-sectional view of an applicator according to the invention;

Fig. 2 is a side view of a head of the applicator depicted in Fig. 1;

30 Fig. 3 is a view on a cross-section from the line III-III of Fig. 2 showing the head on the right with a roller in position and on the left with the roller removed;

container from a can using pouring apparatus as described previously, the pouring apparatus being sized to direct paint during pouring into the paint container.

5 Possibly, the paint container is the body of an applicator as described above.

Further in accordance with the present invention is to provide an applicator in which a roller is associated with an applicator head such that 10 paint is distributed upon that roller using paint bias means and the head incorporates paint traps to accommodate transient excess flows of paint due to pulsed action of the paint bias means.

15 Also in accordance with the present invention there is provided an applicator for applying paint to a surface, the applicator including paint biasing means to facilitate flow of paint to paint distribution means, the paint biasing means including a grip configured to progressively displace a plunger in order to facilitate paint flow, the displacement range of that grip is limited in order to similarly limit displacement of the plunger and therefore rate of paint flow.

20 Possibly, grip displacement is limited by a stop member.

Further in accordance with the present invention, there is provided an applicator in which paint biasing means facilitates paint flow to paint 25 distribution means wherein the paint bias means is associated with an extension handle which extends from the paint distribution means to the paint biasing means to allow operation of the applicator at displaced or elevated position whilst still allowing appropriate operation of the paint biasing means.

30 Additionally, in accordance with the present invention there is provided an applicator for applying paint to a surface, the applicator including paint distribution means within which an effective slot outlet is provided through which paint is presented to paint distribution means through use of paint biasing means, the paint being accommodated within a paint canister and that

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rod means extends into and along the handle. Preferably, the rod means extends beyond the handle and may include a gripping portion at its distal end by which the plunger may be moved. The gripping portion may include a lateral extension, extending laterally beyond the handle. The lateral extension 5 may form a base on which the tool may be supported, and may include a planar surface perpendicular to the longitudinal axis of the body.

The rod means may comprise a rod extending from the plunger head and a gripping member telescopically mounted within the handle and slidably 10 engaged with the rod. The gripping portion may be mounted on the gripping member. Preferably the gripping member is biased to a retracted position.

15 Preferably the control means includes a trigger mounted on or adjacent to the handle. The handle may include a linkage operable by the trigger to advance the plunger. The linkage may comprise a link plate having an oversized aperture through which the rod passes. The link plate may be biased towards the trigger and, in a relaxed condition, out of engagement with the plunger, so that as the trigger is operated the link plate is brought into engagement with the plunger, further operation of the trigger moving the link 20 plate towards the paint in the body or container and causing the plunger to advance to bias the paint towards the distribution means.

25 Preferably the applicator includes connection means interposed between the applicator head and the body. The connection means may be articulated to allow the angle of the paint distribution means to be varied relative to the longitudinal axis of the body.

30 Preferably the paint container is formed of translucent or transparent material, or may include a window of translucent or transparent material, to provide a visual indication of the amount of paint in the container.

According to the present invention, there is provided a method of applying paint to a surface, the method comprising the use of an applicator as described previously, the method comprising providing paint to the applicator,

The present invention relates to applicators and particularly but not exclusively an applicator for applying paint to a surface.

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Tools suitable for applying paint to a surface are well known and include brushes, rollers, paint pads etc. Normally, these require the separate provision of a paint container with the paint loaded from the container onto the tool. Loading is by dipping an end of the tool into the container and wiping off the excess. More recently pressurised paint containers have been used to supply paint to the tool. Both approaches suffer a number of disadvantages. They can be cumbersome to use. Pressured paint containers or pumping requires the container to be remote from the tool as it would make the tool too heavy to handle. Thus, flexible piping must be used and this impedes the movement of the operator. Achieving a controllable flow of paint to the tool may be problematic since the viscosity of paint may vary considerably. The extensive clean down of equipment after painting is finished can be off putting to users, and may often mean that such systems are only used by professionals or by users painting large surface areas. The pressure in such systems can vary resulting in a variable flow of paint to the tool.

According to the present invention, there is provided an applicator for applying paint to a surface, the applicator including a body for paint, paint distribution means to distribute paint in use onto a surface by contact with that surface, the body including paint biasing means to bias, in use, the paint toward the distribution means, an operator in use holding the tool by the body and operating control means for control of the bias means and so the flow of paint to the paint distribution means.

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Preferably the paint distribution means is releasably engageable with the body and forms a separable applicator head. The paint distribution means may include a brush, a pad, or a roller. The head may include mounting means for rotatably mounting a roller with a roller surface which in use